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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,985	02/28/2002	Ronald Willard Baker	2001-0451.00	6315

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EXAMINER

LAZOR, MICHELLE A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,985

Applicant(s)

BAKER ET AL.

Examiner

Michelle A Lazor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 4, 9 – 17, 19 – 25, 28 – 31, 36, and 39 – 42 are rejected under 35

U.S.C. 102(b) as being anticipated by Sanderson et al. (WO 99/64243).

Regarding Claims 1, 2, 12, and 19 – 24, Sanderson et al. disclose an ink jet printer comprising a housing; an ink jet printing apparatus located within the housing, and a coating apparatus positioned before the ink jet printing device which comprises a rotatable first roll (162); a rotatable second roll (164) positioned adjacent to the first roll and defining with the first roll a first nip through which the printing substrate passes; and a metering device comprising a supply of coating liquid (100) in contact with the second roll and a doctor blade (69) contacting the second roll, which transfers the coating liquid to the printing substrate, wherein the surface energy or surface hardness of the second roll is greater than the surface energy of surface hardness of the coating liquid (Figures 4 and 5; page 7, line 4 – page 8, line 11 and page 9, lines 1 – 12). Thus, since any coating liquid may be used, thereby complying with having a lower surface energy or lower surface hardness than the second roll, Sanderson et al. disclose all the limitations of Claims 1, 2, 12, and 19 – 24, and anticipate the claimed invention.

Regarding Claims 3, 11, 25, 28, and 36, Sanderson et al. disclose an additional rotatable third roll (66) contacting the second roll (64) and forming a second nip there between; and a doctor blade (69) in contact with the third roll, the doctor blade applying a layer of coating liquid onto the third roll, the third roll transferring the coating liquid to the second roll, and the second roll in turn transferring the coating liquid to the printing substrate, wherein the hardness of the second roll is less than the hardness of the third roll (Figure 2; page 5, lines 1 – 30). Thus Sanderson et al. disclose all the limitations of Claims 1, 2, 12, and 19 – 24, and anticipate the claimed invention.

Regarding Claim 4, Sanderson et al. disclose the second roll comprising cast urethane (page 5, lines 26 – 30). Thus Sanderson et al. disclose all the limitations of Claim 4, and anticipate the claimed invention.

Regarding Claims 9 and 10, Sanderson et al. disclose the second roll formed from a material having a sufficiently low hardness to permit the selected roll to conform to the other roll and to ensure contact between the second roll and the third roll along substantially the entire first or second nip (page 5, lines 15 – 24). Thus Sanderson et al. disclose all the limitations of Claims 9 and 10, and anticipate the claimed invention.

Regarding Claims 13 – 15, Sanderson et al. disclose the second roll to have a surface roughness of 0.3 micrometers R_a (page 5, lines 29 – 30), the doctor blade contacting the third roll and oriented at a contact angle relative to the third roll, the doctor blade having a longitudinal edge that contacts the third roll with a contact force so that a substantially uniform quantity of coating liquid is received by the third roll as the third roll is caused to rotate, wherein the contact force is sufficient to ensure that the doctor blade remains in contact with the third roll as the third

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roll is caused to rotate (Figures 1 and 2). Thus Sanderson et al. disclose all the limitations of Claims 13 – 15, and anticipate the claimed invention.

Regarding Claims 16 and 17, Sanderson et al. disclose the third roll to have a roughness between 1 and 4 micrometers R_a (page 4, lines 1 – 10), and the contact angle is considered between 20 and 30 degrees (Figures 1 and 2). Thus Sanderson et al. disclose all the limitations of Claims 16 and 17, and anticipate the claimed invention.

Regarding Claims 28 – 31 and 39 – 42, Sanderson et al. disclose the third roll to be substantially cylindrical, comprising a surface, a first end, an opposite second end and a longitudinal length between the first and second ends, and defines with the second roll a second nip, wherein the doctor blade further comprises a first end and an opposite second end, and wherein the distal edge of the doctor blade extends between the first and second ends of the doctor blade and has a longitudinal length, wherein the surface energy of substantially the entire length of the distal edge of the doctor blade is less than the surface energy of the coating liquid (Figures 1 and 2). Thus, since any coating liquid may be used, thereby complying with having a higher surface energy than the doctor blade, Sanderson et al. disclose all the limitations of Claims 28 – 31 and 39 – 42, and anticipate the claimed invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claim 1 above, in view of Chiang et al. (U.S. Patent No. 6451438).

Sanderson et al. disclose all the limitations of Claim 1, but do not disclose the second roll to comprise urethane and a silicone polyol. However, Chiang et al. disclose a roll which comprises urethane and a silicone polyol (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a urethane and a silicone polyol to provide a low tacky, conductive, sort roller for use in a printer (Abstract).

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claim 1 above, in view of Masuda et al. (U.S. Patent No. 5475473).

Sanderson et al. disclose all the limitations of Claim 1, but do not disclose the second roll to comprise urethane and a silicone polyol between about 2 and about 7 parts per hundred rubber of a silicone polyol. However, Masuda et al. disclose a roll which comprises urethane and a silicone polyol between about 2 and about 7 parts per hundred rubber of a silicone polyol (column 5, line 63 – column 6, line 6). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a urethane and a silicone polyol between about 2 and about 7 parts per hundred rubber of a silicone polyol to provide intimate contact between the drum and the substrate (column 5, lines 63 – 65).

6. Claims 7, 8, 26, 27, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claims 1, 25, and 36 above, in view of Till et al. (U.S. Patent No. 6006059).

Sanderson et al. disclose all the limitations of Claims 1, 25, and 36, but do not disclose the surface energy of the second roll to be between 35 and 40 dyne/cm as well as the surface

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energy of the coating liquid to be between 30 and 35 dyne/cm. However, Till et al. disclose the surface energy of the second roll to be between 35 and 40 dyne/cm (column 6, lines 40 – 57).

Since any coating material may be used, the surface energy of the coating liquid to be between 30 and 35 dyne/cm would be known to one of ordinary skill in the art. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the surface energy of the second roll to be between 35 and 40 dyne/cm since it is well known in the art to use rolls having surface energies as claimed.

7. Claims 18, 32, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al.

Regarding Claim 18, although there is no specific disclosure as to the contact force to be between 0.4 and about 0.5 N/cm, it is considered obvious the contact force could be controlled to between 0.4 and about 0.5 N/cm since Sanderson et al. implies the load of the blade to change against the roll (page 5, lines 9 – 14).

Regarding Claims 32 and 43, although there is no specific disclosure as to the design of the doctor blade, one of ordinary skill in the art would know how to appropriately design the doctor blade.

8. Claims 33 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25 above, in view of Hanson et al. (U.S. Patent No. 4909182).

Sanderson et al. disclose all the limitations of Claim 25, but do not disclose a coating of silicone wax on the distal edge of the doctor blade having a surface energy that is less than the surface energy of the coating liquid. However, Hanson et al. disclose using silicone on a doctor

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blade (column 6, lines 17 – 35). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use silicone to improve cooperation between the transfer roll and the blade (column 6, lines 17 – 19).

9. Claims 34 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25 above, in view of Okuda et al. (U.S. Patent No. 5671675).

Sanderson et al. disclose all the limitations of Claim 25, but do not disclose a coating of fluorocarbon on the distal edge of the doctor blade having a surface energy that is less than the surface energy of the coating liquid. However, Okuda et al. disclose using fluorocarbon on a doctor blade (column 5, lines 43 – 52). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use fluorocarbon to decrease the friction coefficient with the contact roller (column 5, lines 49 – 50).

10. Claims 35 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25 above, in view of Illman et al. (U.S. Patent No. 3990132).

Sanderson et al. disclose all the limitations of Claim 25, but do not disclose a coating of Teflon on the distal edge of the doctor blade having a surface energy that is less than the surface energy of the coating liquid. However, Illman et al. disclose using Teflon on a doctor blade (column 7, lines 1 – 3). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use Teflon to decrease adhesion between the doctor blade and the coating material.

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The request to correct the inventorship of this nonprovisional application under 37 CFR 1.48(a) is deficient because:

An oath or declaration by each actual inventor or inventors listing the entire inventive entity has not been submitted (see MPEP 201.03 B).

However, noting the change on the original oath has effected the correction of the spelling of Inventor Gogate's name. Please note, neither a new oath or a petition are required to correct typographical or transliteration errors in the spelling of an inventor's name (see MPEP 605.04(b)).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle A Lazor whose telephone number is 703-305-7976.

The examiner can normally be reached on Mon - Thurs 6:30 - 4:00, Fridays 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

MAL
July 28, 2003


RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
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